while the stomach, intestines, mesentery, gall-bladder, and possibly the kidneys and liver do not receive impressions of pain, touch, heat, and cold, the parietal peritoneum is exceedingly rich in sensory nerves. Intestinal colic, he believes, is due to sudden stretching of these nerves associated with distention of a loop of intestine. Moreover, adhesions only give rise to pain when they cause a certain amount of stretching of the peritoneum. In acute peritonitis the extreme sensitiveness of the anterior abdominal wall on pressure is due almost entirely to the inflammation of the anterior parietal peritoneum.

## OPHTHALMOLOGY.

UNDER THE CHARGE OF

EDWARD JACKSON, A.M., M.D.,
OF DENVER,

AND

T. B. SCHNEIDEMAN, A.M., M.D.,
PROFESSOR OF DISEASES OF THE EYE IN THE PHILADELPHIA POLYCLINIC.

**Glaucoma Induced by Cocaine.**—J. HINCHELWOOD (Glasgow) reports the case of a woman, aged fifty years, suffering from asthenopia, in whom cocaine was used to dilate the pupils to obtain a good view of the fundus of the eye. A few hours later the eye became painful, and next morning presented the typical clinical picture of acute glaucoma. Eserin, followed by iridectomy, restored the normal tension of the eyeball, but not her previous normal vision.—*Ophthalmic Review*, November, 1900.

S. SNELL (Sheffield) reports a similar case, in which the cocaine had been prescribed to relieve discomfort of the eye, and a 1 per cent. solution had been instilled three times during the day. Eserin and iridectomy secured a satisfactory recovery of vision.—*Ophthalmic Review*, February, 1901.

[These cases illustrate very clearly the connection of mydriatics with glaucoma. The mydriatic excites glaucoma, because it dilates the pupil in an eye having a glaucomatous structure—that is, an anterior chamber so narrowed that the crowding of the retracted iris into the angle obstructs the outflow channels and so raises the tension of the eyeball. Cocaine is frequently used in the treatment of glaucoma, but for this purpose should always be combined with a myotic strong enough to prevent it from dilating the pupil. In such a combination its tendency to contract the vessels of the iris and render the iris thinner aids in opening the outflow channel, thus reducing the tension. But it should be remembered that the anæmia produced by cocaine is quite brief, and is followed by some tendency to hyperæmia. So that even combined with a myotic it should be used in glaucoma with great caution.

The diagnostic value of a mydriatic in glaucoma which I have before urged (see this JOURNAL, April, 1898) is also illustrated in the above cases. The possibility of glaucoma had been suspected in one of them, in the other it had not. The use of the cocaine gave unmistakable evidence of such a condition; then the iridectomy permanently cured the glaucoma. If the cocaine had not been used the glaucomatous process, following its common course, would probably have permanently damaged vision to a very serious degree before it was discovered, and when discovered might have been far less amenable to treatment.—ED.]

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**Tobacco Amblyopia.**—C. E. SHAW (Belfast, Ireland) reports a case of well-marked toxic amblyopia in a boy, aged fifteen years, who had smoked cigarettes from the time he was eight years old. He also reports a case in a man, aged forty years, who smoked but one or two ounces of tobacco a week, having decreased his indulgence by one-half a year previously.—*Ophthalmic Review*, May, 1901.

[The great mass of cases of tobacco amblyopia occur after the age of forty, similar cases occurring earlier being largely due to alcohol; but in relation to poisoning we always have to remember that individual susceptibility is the supreme factor and capable of breaking all rules.—ED.]

J. H. FISHER (London) calls attention to the well-established observation that nicotine destroys the power of ganglion cells to transmit impulses. Professor Langley found that painting a ganglion with nicotine produced the same effect as injecting the drug into a vein. Stimuli applied on the proximal side of the ganglion or to the ganglion itself produced no effect; applied to the distal side of the ganglion they still proved efficacious. Painting of a nerve trunk with nicotine does not prevent the transmission of impulses. To explain the central scotoma of tobacco amblyopia, Fisher offers the supposition that visual impulses from the macula pass through the ganglion cells of the retina, while those coming from peripheral parts of the retina pass along more direct nerve paths without having to go through ganglion cells. He refers to the crowding of ganglion cells in the region of the macula and their comparative scarcity in the more peripheral parts.—*Ophthalmic Review*, June, 1901.

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**Ophthalmoscopical Changes in Pneumonia.**—A. PETERS (Bonn) reports the case of a man, aged twenty years, who, during a rather light attack of pneumonia, noticed impairment of vision of the left eye. One month later he applied on this account, presenting a subsiding iritis. A mydriatic dilated the pupil except for two slender adhesions. The ophthalmoscope revealed evidence of a recent chorio-retinitis, involving the region around the optic disk, in which were seven large rounded, ill-defined, light-gray, prominent spots. Similar lesions were observed in a case reported by Fraenkel. Peters also reports one in which the spots were more sharply defined; but the fact that the pneumonia was complicated by tuberculosis rendered the nature of the lesions doubtful. The explanation offered regarding such lesions is that they arise from a pneumococcus embolism.—*Klinische Monatsbl. für Augenheilkunde*, May, 1901.

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**Malarial Diseases of the Cornea and Iris.**—A. LE PRINCE (Bourges), although admitting these are much more rare than malarial diseases involving the retina and other deep structures of the eye, regards them as of considerable importance. They include iritis, a form of diffuse parenchymatous keratitis, and a form of corneal ulcer which he regards as identical with dendritic keratitis. He reports a case of the latter occurring in a woman, aged twenty-four years, shortly after confinement. The ulcer had the characteristic branching form, and improvement followed rather promptly upon the administration of quinine and arsenic.—*Annales d' Oculistique*, May, 1901.

[Le Prince makes no reference to what seems to be an important feature of these cases: the disturbance of the nerve-supply of the part. The sensibility of the cornea as tested with the twisted pledget of cotton is often, perhaps always, markedly diminished. We have recently seen a case in which this impairment of sensibility was confined to a segment of the cornea, and upon this segment all the ulcers were situated.—ED.]

**Economic Valuation of Vision.**—H. V. WURDEMANN (Milwaukee) discusses this extremely important and complicated subject, employing in the main the formulas suggested by Magnus. Absolutely perfect visual acuity is very rarely demanded to follow any occupation, while certain occupations require less than others. Wurdemann separates the common forms of employment into two groups: one requiring visual acuteness equal to 75/100 as the best condition or full ability for pursuing them, and for which vision of less than 15/100 constitutes total disability. In the second group vision of 50/100 gives full ability, and of 5/100 complete disability. For instance, a person whose acuteness of vision was reduced to 40/100 would, for occupations of the first group, possess an earning capacity of only 5/12, while for an occupation of the second group his earning capacity would be 7/9. For the first group the loss of one eye entails a loss of 30 per cent. of earning ability for the first year, and of 20 per cent. afterward; while for the second group the losses would be respectively 27 per cent. and 18 per cent. Limitation of the field of vision is also an important factor in damage to earning capacity. To exactly estimate the damage in the individual case the present earnings and also the probable future earnings must be considered. In this way the patient's age becomes an important element in the calculation. In actual practice still other circumstances, as contributory negligence, expense, and suffering incurred, etc., will also influence the estimate.—*Annals of Ophthalmology*, April, 1901.

[The just estimate of damage from loss of vision must always remain a difficult and complicated problem; but the larger the number of elements that can be estimated with mathematical exactness the better prepared will we be to properly weigh considerations that cannot be so stated. The reign of pure empiricism and mere whim in the estimation of damages will be shortened by such discussions, and all who are called upon to form such estimates, as in the rating of pension cases and the adjustment of compensation for accidental injuries, should carefully read this discussion in the original, since in many things it cannot be condensed.—ED.]

**Congenital Condition Simulating Choked Disk.**—C. H. BEARD (Chicago) reports a case in which the optic nerve entrance was entirely hidden in both eyes by a swelling of fully eight diopters. Careful investigation revealed no evidence of brain disease or other probable cause of optic neuritis. The patient has remained under observation for seven years without noticeable change in the ophthalmoscopic appearances, with no deterioration of vision, and now seems to be in perfect general health.—*Ophthalmic Record*, June, 1901.

[Cases of this character are of great importance on account of the risk of mistaking such a condition for optic neuritis, significant of grave cerebral or constitutional disease. Others of the kind have been from time to time reported, but none quite so pronounced as Beard's. Prolonged observation may be required to settle the question raised by such a case; but if one bears in mind that this anomalous condition may exist its true character may be suspected from the first examination. The important diagnostic point is the calibre of the retinal vessels. In choked disk the arteries are small, the veins dilated. This relative or absolute enlargement of the retinal veins is not absent in a case of optic neuritis from the time the distinct swelling of the optic disks begins until it passes over into a condition of optic atrophy. The excellent colored plate which accompanies Beard's article shows the absence of this symptom of choked disk, and when he first saw the patient he noted that "all the retinal vessels were a trifle smaller in calibre than is normal."—ED.]

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**Methyl Alcohol Amblyopia.**—G. E. DE SCHWEINITZ (Philadelphia) reports a case in which the pathway of entrance of the poison was through the lungs and the cutaneous surface. The patient was a man, aged thirty-nine years, who for three years had worked exclusively at varnishing. The shellac he used was mixed with Columbia spirits, containing about 95 per cent. of methyl alcohol. Previously he had worked but three or four days at a time at shellacing, but for two months prior to his blindness he had been exposed to the fumes daily. He had frequently noticed attacks of dizziness, vertigo, and, as he expressed it, "drunkenness" when he shellaced in enclosed spaces, particularly in warm weather; but no such attack had been experienced within two weeks prior to his blindness. The clinical features of the attack were the same as have been noted after more acute poisoning with this drug. The onset of blindness was quite sudden; there was a period of partial recovery, but in the end the blindness became quite complete. This patient, beside inhaling the fumes, had been accustomed to wash the stains from his hands, and sometimes had washed his face in the wood alcohol.—*Ophthalmic Record*, June, 1901.

A. BIRCH-HIRSCHFELD (Leipsic), from an experimental study of the action of methyl alcohol upon the visual apparatus of dogs and chickens, concludes: That the appearances of degeneration are presented in the nerve-cells of the retina before any alteration can be found in the trunk of the optic nerve. Later the degeneration is found in a certain part of the section of the nerve, but not involving all the bundles. The degenerated portions of the optic nerve show no signs of an inflammatory process, neither exudation, infiltration, nor alteration of the vessels. Both in its clinical aspects and anatomical changes methyl alcohol poisoning closely resembles that produced by ethyl alcohol.—*Graefe's Archiv für Ophthalmologie*, Band lii., Heft 2.